## ABSTRACT OF THE DISCLOSURE

A motor controller for simultaneously controlling operations of at least two system motors by pulse-width modulation. The motor controller includes a pair of switches, a pair of pulse signal generators, and a phase shifter. The switches are used for supplying driving power to the two system motors. The pulse signal generators are used for generating a pair of pulse signals respectively having predetermined duty ratios at predetermined cycles, and outputting the pulse signals to the pair of switches to turn on or off the pair of switches. The phase shifter is used for inverting, with respect to the phase of one of the two pulse signals that is generated and output by one of the two pulse signal generators, the phase of the other of the two pulse signals, which is generated and output by the other of the two pulse signal generators, by 180 degrees.

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